MTF Stand 6 – BTeV Test Stand

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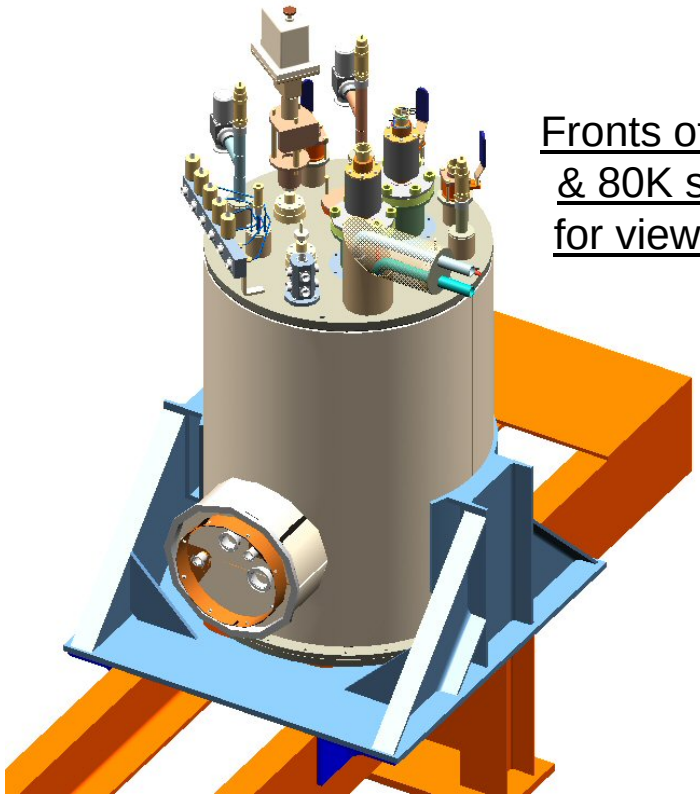
Overall Layout

General feedbox layout



Actuator for JT valve

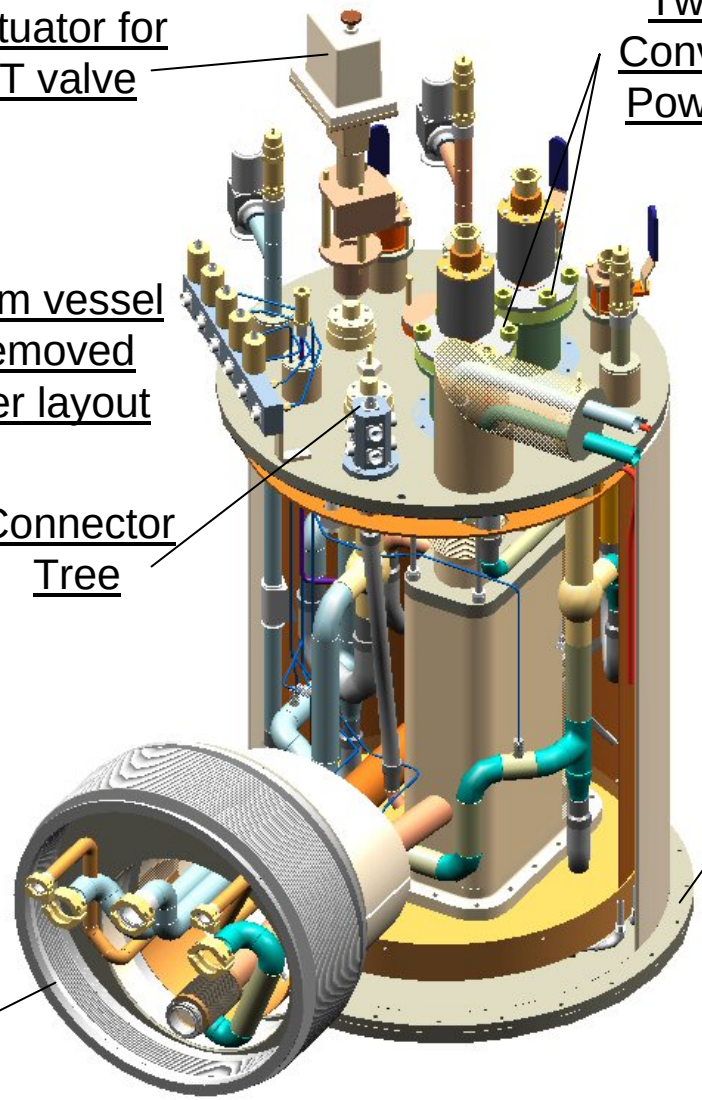
Two 10kA Conventional Power leads

Fronts of vacuum vessel & 80K shield removed for viewing inner layout

Connector Tree

Removable bottom of vacuum vessel

Adapter for BTeV magnet

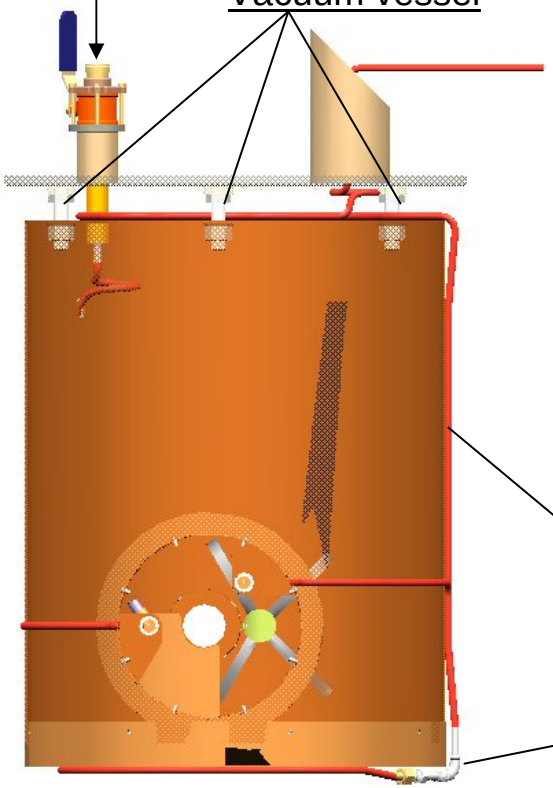


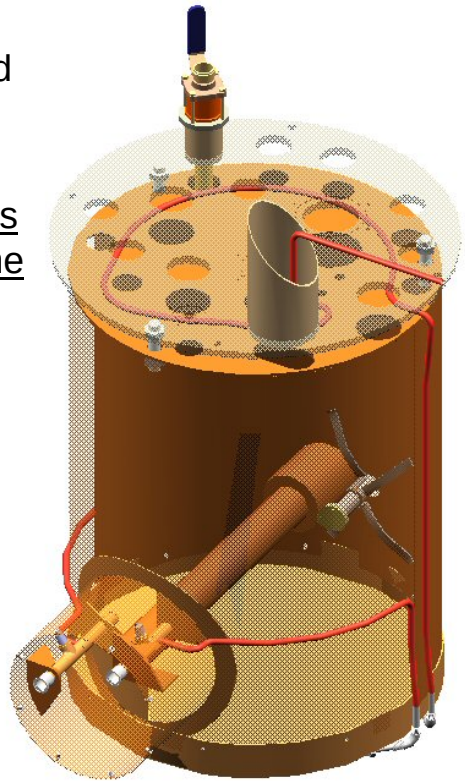
80K Copper Shield & LN2 Lines

(top plate of vacuum vessel,
front and nose of copper shield
are translucent in images)

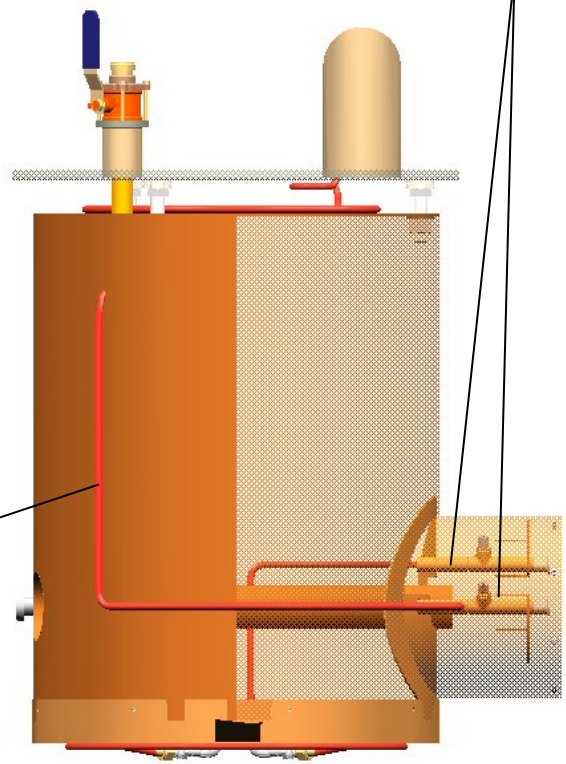
LN2 Inlet

Nylon rods support
The shield, which hangs
From the top plate of the
Vacuum vessel





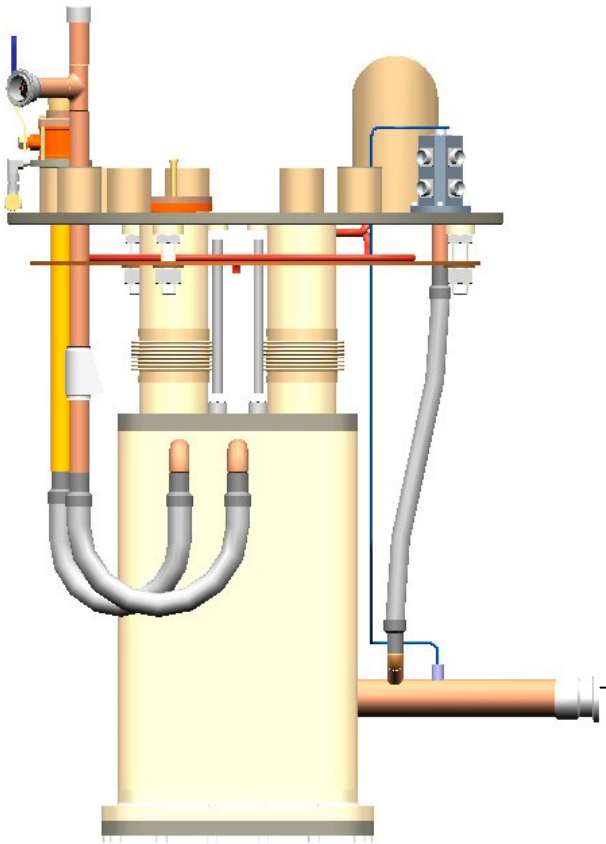
Piping for LN2
supply to/return from
magnet

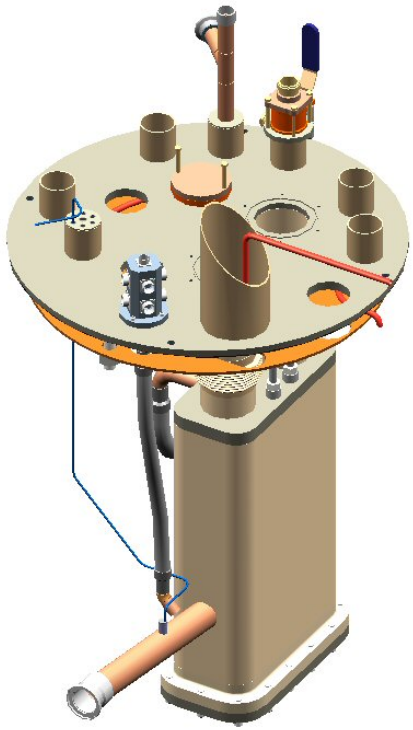


LN2 lines cooling the
copper shield

Lines can be opened
To remove bottom of shield

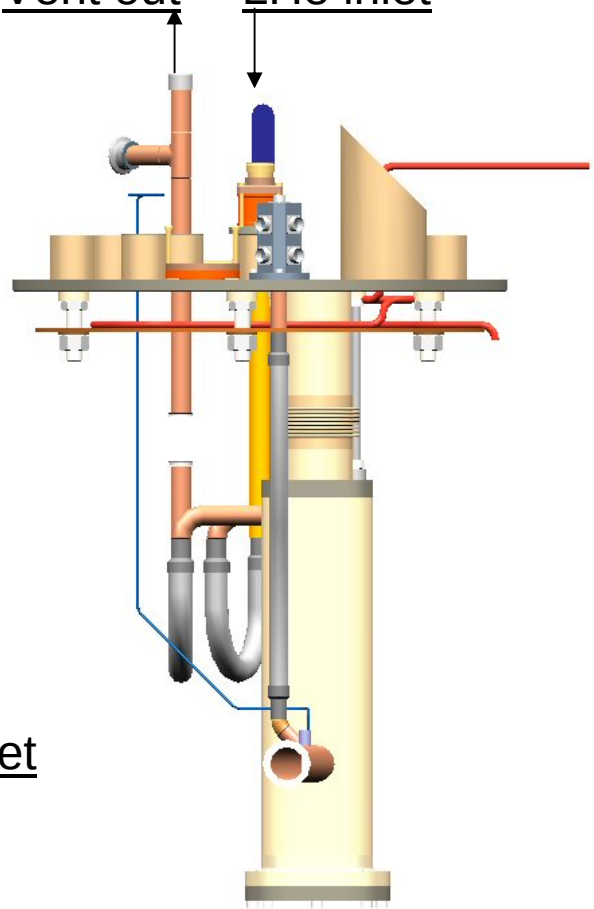
Helium 1-Phase Supply





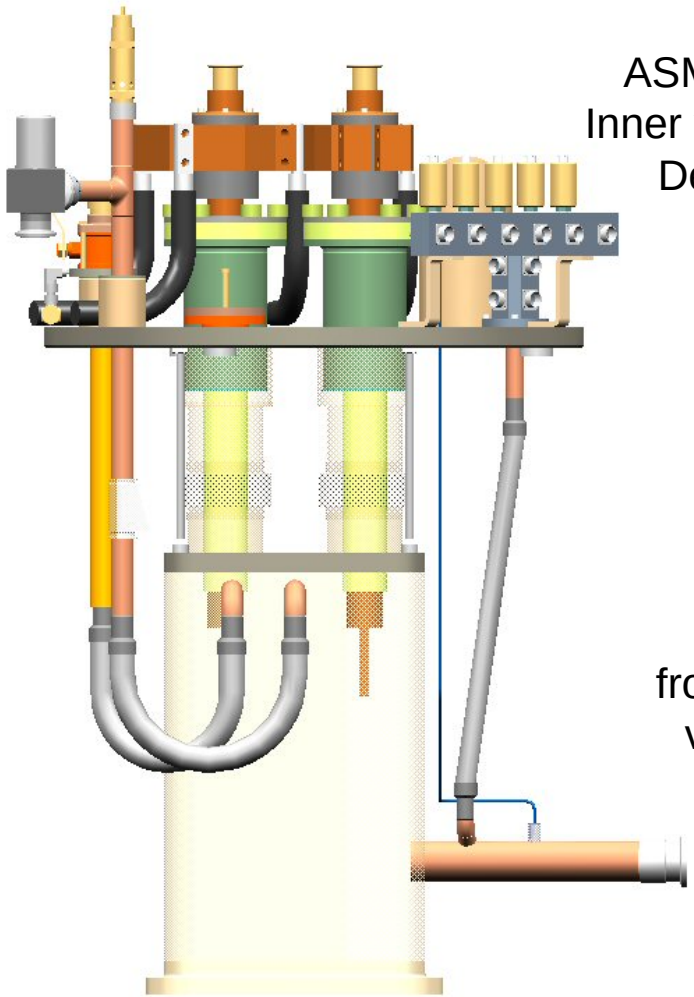
GHe
Vent out

LHe inlet

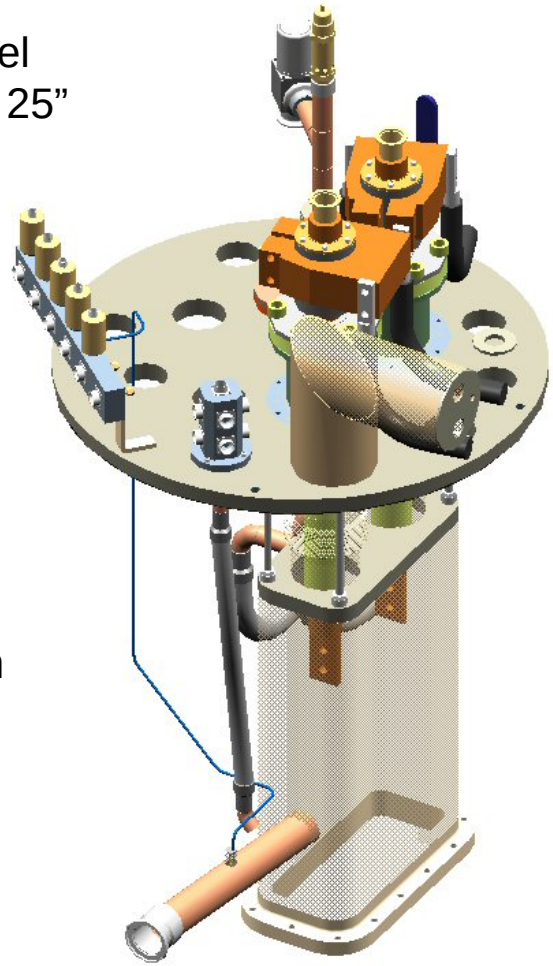


LHe supply to magnet

Helium Vessel with 10kA Power Leads



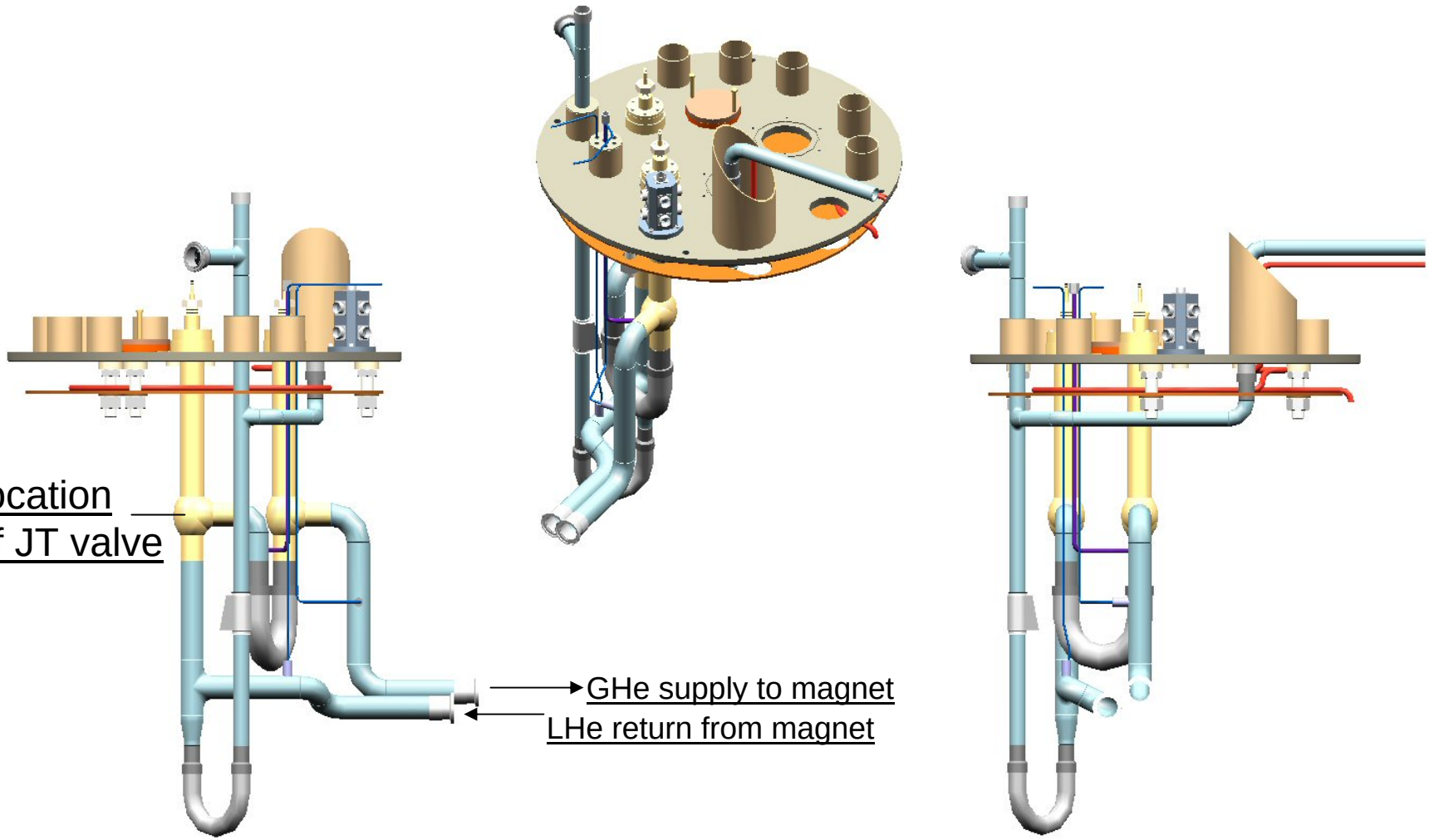
ASME Coded helium vessel
Inner volume 13.75” x 5.5” x 25”
Design pressure 215 psi



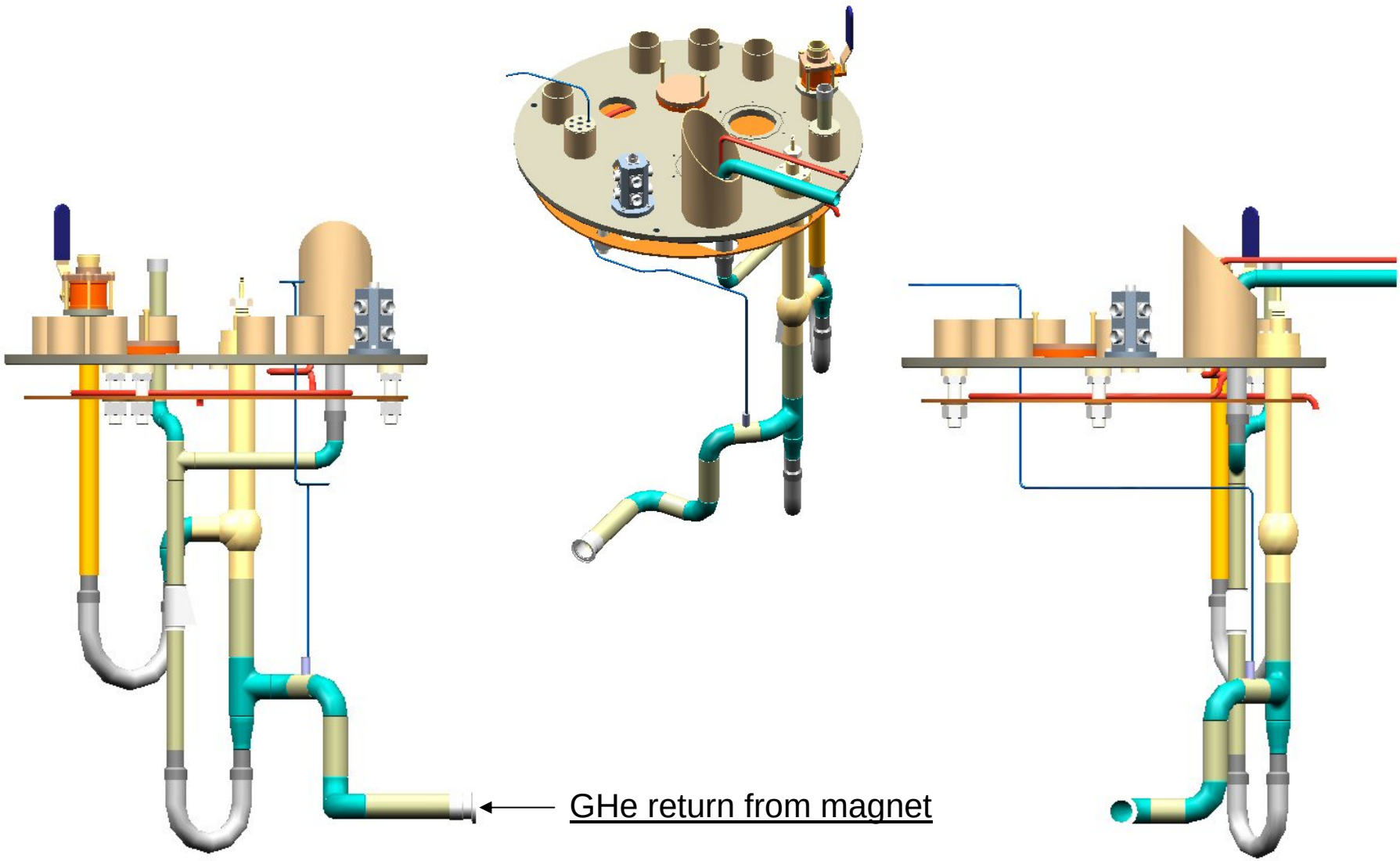
Helium vessel hangs from top plate of vacuum vessel using stainless steel rods

Removable bottom cover for power lead installation

Helium 1-Phase Return/ 2-Phase Supply



Helium 2-Phase Return



Documentation Status

- Helium vessel engineering note – complete
- Vacuum vessel engineering note – 90% complete
- Conceptual Design Review – 26 January